

Amendments to the Claims

This listing of claims replaces all previous listings of claims in this application.

Claims

1. (Currently amended) A carriage servo control system for servo-controlling a movement of a carriage meansdevice in a vertical direction to a track formed on a recording medium, in which the carriage meansdevice has a detecting meansdevice mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said carriage servo control system comprising:

an error signal producing meansdevice for producing an error signal showing an error between a radiated position of the optical beam on the recording medium and a position of the track;

a periodic signal producing meansdevice for producing a periodic signal of which period is constant and previously determined so as to correspond to a movement accuracy of the carriage meansdevice;

a drive signal producing meansdevice for producing a drive signal to move the carriage meansdevice on a basis of both the produced periodic signal and the produced error signal; and

a drive signal supplying meansdevice for supplying the produced drive signal to a moving meansdevice configured to move the carriage meansdevice in the vertical direction, so as to move said carriage meansdevice by the moving meansdevice on a basis of the supplied drive signal,

wherein said drive signal producing device produces the drive signal on a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value; and

wherein said drive signal producing device multiplies the periodic signal and the partial error signal produced together to produce the drive signal.

2. (Currently amended) The carriage servo control system according to claim 1, wherein said periodic signal producing meansdevice produces the periodic signal made up of only a signal component with a frequency not more than a

predetermined frequency.

Claims 3-6 (Cancelled)

7. (Currently amended) ~~[[A]]The carriage servo control system according to claim 1, for servo-controlling a movement of carriage device in a vertical direction to a track formed on a recording medium, in which the carriage device has a detecting device mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said carriage servo control system comprising:~~

an error signal producing device for producing an error signal showing an error between a radiated position of the optical beam on the recording medium and a position of the track;

a periodic signal producing device for producing a periodic signal of which period is constant and previously determined so as to correspond to a movement accuracy of the carriage device;

a drive signal producing device for producing a drive signal to move the carriage device on a basis of both the produced periodic signal and the produced error signal; and

a drive signal supplying device for supplying the produced drive signal to a moving device configured to move the carriage device in the vertical direction, so as to move said carriage device by the moving device on a basis of the supplied drive signal,

wherein said drive signal producing meansdevice produces the drive signal on a basis of a partial periodic signal and the error signal, said partial periodic signal serving as the periodic signal and being included within a period previously determined based on the error signal; and

wherein said drive signal producing device multiplies the partial periodic signal and the error signal produced together to produce the drive signal.

Claims 8-10 (Cancelled)

11. (Currently amended) An information recording medium on which program for carriage servo control is recorded so that the program is readable by a computer incorporated in a carriage servo control system for servo-controlling

movement of a carriage meansdevice in a vertical direction to a track formed on a recording medium, in which the carriage meansdevice has a meansdevice mounted thereon for transmitting an optical beam to the track so as to perform at least one of recording and reproduction of information on and from the track, said program causing the computer to function as:

an error signal producing meansdevice for producing an error signal showing an error between a radiated position of the optical beam on the recording medium and a position of the track;

a periodic signal producing meansdevice for producing a periodic signal of which period is constant and previously determined so as to correspond to a movement accuracy of the carriage meansdevice;

a drive signal producing meansdevice for producing a drive signal to move the carriage meansdevice on a basis of both the produced periodic signal and the produced error signal; and

a drive signal supplying meansdevice for supplying the produced drive signal to a moving meansdevice configured to move the carriage meansdevice in the vertical direction, so as to move said carriage meansdevice by the moving meansdevice on a basis of the supplied drive signal;

wherein said drive signal producing device produces the drive signal on a basis of a partial error signal and the periodic signal, said partial error signal serving as the error signal having a value not less than a predetermined threshold value; and

wherein said drive signal producing device multiplies the periodic signal and the partial error signal produced together to produce the drive signal.

12. (New) The carriage servo control system according to claim 7, wherein said periodic signal producing device produces the periodic signal made up of only a signal component with a frequency not more than a predetermined frequency.